

**UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE**

**TECHNICAL GUIDE
SECTION IV**

STATEWIDE
Land Smoothing 466-1

Land Smoothing (acre)

ing depths, provide for more uniform cultivation, improve equipment operation and efficiency, improve terrace alignment, and facilitate contour cultivation.

Conditions where practice applies

This practice applies on areas where depressions, mounds, old terraces, turn rows, and other surface irregularities interfere with the application of needed soil and water conservation and management practices.

It is limited to areas having adequate soil depth or where topsoil can be salvaged and replaced.

Definition

Removing irregularities on the land surface by use of special equipment.

Scope

This practice applies to operations classed as rough grading. Ordinarily, this does not require a complete grid survey. It does not apply to the "floating" done as a regular maintenance practice on irrigated land or the "planning" done as the final step in precision land forming (462) or in irrigation land leveling (464).

Purpose

Improve surface drainage, provide for more effective use of precipitation, obtain more uniform plant-

Design criteria

The extent of rough grading required and tolerances of the finished smoothing job shall be in keeping with the requirements of the planned cropping system.

Plans and specifications

Plans and specifications for land smoothing shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

Land Smoothing Specifications

Construction operations shall be carried out in such a manner that erosion and air and water pollution are minimized and held within legal limits.

The land to be smoothed shall be cleared of vegetative matter and trash.

Irregularities shall be smoothed to the degree required for the planned use and the requirements of subsequent tillage, floating, or planing to be performed.

Where possible, the ground surface should be plowed or disked prior to smoothing.

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NATIONAL
SUPPLEMENT
466-NS-1

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Planning considerations for water quantity and quality

Quantity

1. Effects on the water budget, especially on volumes and rates of runoff, infiltration, and evaporation.
2. Potential for changes in plant growth and transpiration because of changes in the volume of soil water.

Quality

1. Effects on erosion and the movement of sediment and and soluble and sediment-attached substances carried by runoff.
2. Effects on the use and management of nutrients and pesticides.
3. Effects on downstream water quality.
4. Potential for earth moving to uncover or redistribute toxic materials, such as saline soils.
5. Effects on the visual quality of downstream water resources.

MONTANA SUPPLEMENT

Land Smoothing (MT-466)

The following additional standards apply to land smoothing.

Established minimum life. 10 years

Plans and Specifications. Plans and specifications are to be approved for each installation by an individual having design approval authority for the project.

Montana Construction Specification MT-466 applies to this practice.